

*Defining Opportunities for...*

# POLLUTION PREVENTION



**Indiana's preferred alternative  
for environmental protection  
and economic success**

**IDEM**

Indiana Department of  
Environmental Management

**OPPTA**

Office of Pollution Prevention  
And Technical Assistance

# What is Pollution Prevention (P<sup>2</sup>)?

## Pollution Prevention means:

- “Source reduction,” as defined under the Federal Pollution Prevention Act (1990), and
- Other practices that reduce or eliminate the creation of pollution through:
- Increased efficiency in the use of raw materials, energy, water, or other resources, or
- Protection of natural resources by conservation.

## Source Reduction, as defined under the Pollution Prevention Act, is any practice which:

- Reduces the amount of any hazardous substance, pollutant or contaminant entering any waste stream, or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal and
- Reduces the hazards to public health and the environment associated with the release of such substances, pollutants or contaminants.

## What Does P<sup>2</sup> Include?

- Equipment or technology modifications, process or procedure modifications,
- Reformulation or redesign of products, Substitution of raw materials, and
- Improvements in housekeeping, maintenance, training, or inventory control.
- Some practices commonly described as “in process recycling” may qualify as pollution prevention if the recycling system is totally enclosed, hard-piped continuously running, integral to the process, and no shifting of waste occurs from one environmental media to another.

## What Does P<sup>2</sup> Not Include?

- **Recycling:** The toxic chemical or mixture containing the toxic chemical is recycled on-site or off-site.
- **Energy recovery:** The use of a waste material that is combustible and has a heating value high enough to sustain combustion when used in combustion units integrated into an energy recovery system (i.e., industrial furnaces, industrial kilns, and boilers), either on-site or off-site.
- **Treatment:** The chemical or physical modification or neutralization of a toxic chemical or mixture on-site or off-site.
- **Disposal:** Off-site or on-site transfer of waste material to either sub-surface or land disposal facilities (including the abandonment of barrels, container, and other closed receptacles).

## Why Multi-Media?

Pollution prevention emphasizes a multi-media approach. Multi-media refers to air, water, land and workplace environmental media into which pollutants and wastes are emitted, released, discharged, or disposed.

This holistic view of an operation goes to the source of a problem, examines it, and recommends solutions that do not transfer the problem to a different location or form. The end result is actual reduction in the quantity of toxic materials or environmental wastes created in the first place.

## Why P<sup>2</sup>

Stimulates Reinvestment & Enhances Competitiveness

Reduces Government Regulatory Involvement

Reduces Liability & Regulatory Costs

Increases Environmental Protection

Maintains Inventory Control

Reduces Worker Exposure

Mitigates Social Conflicts

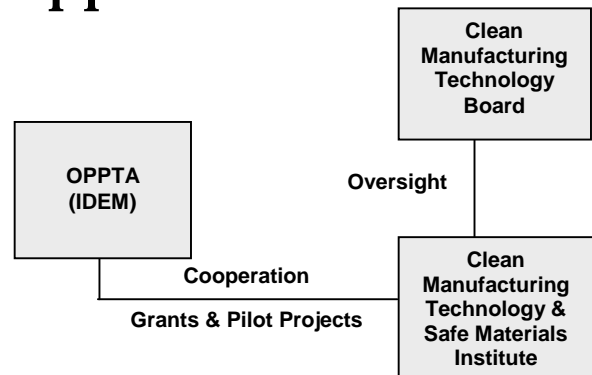
Reduces Waste Shifting

Saves Money

# What is Indiana's approach?

In 1990, the Industrial Pollution Prevention and Safe Materials Act was passed and signed into law. The Act as amended in 1997 includes the provision of Indiana's overall effort in pollution prevention; the Clean Manufacturing Technology Board, the Indiana Clean Manufacturing Technology and Safe Materials Institute (CMTI) and the Office of Pollution Prevention and Technical Assistance (OPPTA) which is housed within the Indiana Department of Environmental Management. All three entities work together to promote clean manufacturing and pollution prevention within the State of Indiana.

The Clean Manufacturing Technology Board is mandated to oversee the CMTI and provide a forum for discussion on clean manufacturing and pollution prevention issues. The CMTI, selected by the Board to be housed at Purdue University, is charged with promoting clean manufacturing to Indiana manufacturers through training, research and development, onsite technical assistance, and policy studies.



IDEM promotes pollution prevention activities in the manufacturing and commercial sectors of Indiana. The Office of Pollution Prevention and Technical Assistance (OPPTA) leads IDEM's proactive role in preventing environmental damage by encouraging manufacturers to incorporate pollution prevention into their operations.

Pollution prevention aims to protect the environment by conserving our finite natural resources and preventing the generation and release of environmental wastes and pollutants.

## How is the OPPTA assisting Indiana to move towards Pollution Prevention?

### OPPTA:

- Promotes the advantages of pollution prevention through education;
- Integrates pollution prevention opportunities for all the regulatory functions of the Indiana Department of Environmental Management;
- Administers the Governor's Awards for "Excellence in Pollution Prevention";
- Sponsors and develops pilot projects and case studies by means of pollution prevention in Indiana;
- Support Annual Pollution Prevention Conference and Trade Show;
- Support Partners for Pollution Prevention;
- Support Department of Defense/State of Indiana Pollution Prevention Partnership;
- Promotes Governor's Toxics Reduction Challenge
- Provides regulatory compliance assistance through pollution prevention;
- Proactively offers pollution prevention opportunities for Indiana businesses through inspection referrals.
- Operates an electronic technical resource website for pollution prevention information;

*For more information on how you can benefit from OPPTA, call:*

**1-800-988-7901**  
**ext. 8172**

Visit us on the Web at:

<http://www.IN.gov/idem/oppta/p2/>

Or email us at: [p2@dem.state.in.us](mailto:p2@dem.state.in.us)

# POLLUTION PREVENTION PLANNING: SIX STEPS TO \$AVINGS

<p>1 Make sure <b>MANAGEMENT</b> supports the effort to investigate pollution prevention opportunities and make changes. Form a Planning Team. Individuals from different departments of the plant can play roles in each step of the planning process. Let everybody know what's going on. <b>SEEK INPUT</b> from personnel at all levels. They are your most valuable asset.</p>	<p>2 Take a critical look at each step of your production process, from purchasing raw materials to shipping finished product. <b>Pinpoint</b> where materials are used and where wastes are generated. Figure out <b>TRUE COSTS</b> of waste generation, including disposal &amp; regulatory costs. These costs, along with other factors, will help you <b>Prioritize losses</b> and <b>TARGET</b> your pollution prevention efforts.</p>	<p>3 The first step to finding effective ways to reduce material losses is to get at the <b>ROOT CAUSE</b> of the problem. What factors are responsible for creating the waste? Poor equipment maintenance? Type of raw materials used? Scheduling? Once you've figured this out, it's time to be creative. List as many alternatives as possible for reducing loss. Use group brainstorming, employee incentives, or outside assistance to generate lots of ideas.</p>
<p>4 You may be able to implement the easy, inexpensive projects right away without further study. For more complex alternatives, determine which are feasible based on three major criteria: 1. Effectiveness 2. Implementability 3. Cost <b>SELECT</b> alternatives for implementation using one or more decision-making tools.</p>	<p>5 Schedule projects keeping in mind resources, time, and financial constraints. Assign responsibilities for who is going to do what and when. <b>TALK</b> to the workers who will be affected by the changes you'll make. Include them in the implementation phase. Stay in touch after implementation, get employee Feedback, and work out the bugs.</p>	<p>6 Track waste generation, material usage, and cost savings as a result of the changes you've made. Use a method of measuring pollution prevention that takes into account variations in production level. Document results. Publicize and <b>CELEBRATE</b> your success! Now <b>Go back to Step 2</b>. Keep the momentum going. There's more work to do.</p>

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